The Economics of Prebisch and ECLA

Werner Baer

SINCE THE CREATION of the United Nations Economic Commission for Latin America, Professor Raul Prebisch, its executive secretary, and his staff have been developing and stubbornly adhering to a theory and pattern of analysis which blame a substantial amount of the difficulties encountered by many underdeveloped countries on the deterioration of the terms of trade. Their viewpoint leads them to recommend industrialization as the principal remedy, which in many cases would necessitate protection and/or subsidization. Although the Prebisch thesis has been attacked from the most reputable quarters of the profession, it is my impression that his theory has never been fully evaluated. It is therefore the purpose of this review to present and interpret the theory as a whole, as it comes forth from various ECLA studies and from the personal papers of Professor Prebisch; to examine its assumptions; to evaluate its internal consistency and its relation to traditional trade theory; and finally, to test the theory against the empirical evidence available.

THE THEORY

Prebisch divides the world in two: the Center and the Periphery. The former consists of the industrial centers of the world, and the latter

Reprinted from *Economic Development and Cultural Change*, January, 1962, pp. 169–82, by permission of the author and The University of Chicago Press. The author is Associate Professor of Economics, Vanderbilt University.

comprises most underdeveloped countries which specialize in agricultural and other primary production. According to the classical scheme, such international division of labor should benefit both the Center and the Periphery, maximizing production, income, and consumption, and spreading the benefits of such maximization to both areas. Prebisch believes the classical arguments are theoretically sound, but he seriously questions the validity of an assumption upon which they are based: "According to this assumption, the benefits of technical progress tend to be distributed alike over the whole community, either by the lowering of prices or the corresponding raising of incomes."[1]

More specifically, Prebisch challenges the assumption of unconstrained competition, especially in the product and factor markets of the Center, and he tries to show how deviations from competition in a dynamic setting tend to appropriate to the Center most of the increment in world income through increased productivity, though such increases take place in both regions. Let us follow his argument step by step.

The basic themes of the analysis revolve around what is considered to be the long-term deterioration of the Periphery's terms of trade, i.e., the fact that "the price relation turned steadily against primary production from the 1870s until the Second World War,"[2] and that this deterioration appeared again in the 1950s. Most critics stop at this point and begin to argue about the validity of making statements about long-term deterioration of terms of trade; or about the importance of knowing what kinds of terms of trade one is talking about; or finally, about the dubious value of computed terms of trade where many important factors, such as changes in the quality of the products, were not taken into account. We shall for the moment accept the assumption that there has been a persistent tendency for the terms of trade to decline, and although the data available are only in the form of commodity terms of trade, let us assume that the downward trend would show regardless of the type of terms of trade computed. We shall, however, return to a discussion of the validity of such an interpretation of the terms of trade in a later section.

The declining terms of trade are caused by disparate forces shaping international demand and supply. The result of this decline is seen as not only being an obstacle to development for countries in the periphery, by curtailing foreign exchange earnings and making vitally needed capital goods and other manufactured imports more expensive (thus

[1] UN, *The Economic Development of Latin America and Its Principal Problems* (1950), p. 1.

[2] *Op. cit.*, p. 8.

causing a decline in the capacity to import), but also as representing a transfer from the Periphery to the Center of "a greater part of the fruits of increased productivity. . . "[3] Let us now see how Prebisch develops his argument.

The explanation of declining terms of trade as seen from the demand point of view is fairly simple. It is stated in the context of an expanding world economy. The root of the problem lies in the disparity of the income elasticity of demand for imports at the Center and the Periphery. The income elasticity of demand at the Center is quite low—less than one—while it usually exceeds one in underdeveloped countries.[4] The demand curves for the latter's imports and exports are also price-inelastic. There are a number of reasons for the low income elasticity for imports of the center countries. Their imports from the periphery consist of food and other primary products. The slow growth of demand for food is attributed to the operation of Engel's law and to agricultural protective measures practiced by many countries at the center. The lag in the growth rate of imports of primary materials is usually attributed to advances in technology (which make it possible to use primary inputs more efficiently, thus creating a decline in the raw material-output ratio), and to increased use of synthetic substitutes.

Hence, the low income elasticity of demand for imports of the center —which means that imports of the center grow at a slower rate than national income, combined with higher rates of output at the periphery due to increasing productivity, cause a downward pressure on the prices of exports of the periphery. Meanwhile, the higher income elasticity of import demand in the periphery tends either to keep the import price steady if productivity at the center increases at the same rate, or to raise the price of imports if productivity does not rise fast enough or if monopolistic elements at the center restrict the supply. The net result is a deterioration of the terms of trade for the periphery, curtailing its capacity to import.

Although we have already talked about the supply side implicitly by bringing in productivity considerations, Prebisch has a more sophisticated approach, linking changes of productivity to the terms of trade and ultimately to transfers of income from the periphery to the center. There have been substantial increases of productivity in the center's

[3] Raul Prebisch, "Commercial Policy in the Underdeveloped Countries," *American Economic Review, Papers and Proceedings* (May, 1959), p. 256.

[4] Robert Lekachman, *National Policy for Economic Welfare at Home and Abroad*, comments by Professor Prebisch, p. 278; see also Prebisch, *op. cit.*

domestic and export industries and in the export sector of the periphery, while the productivity of sectors catering to the domestic market of the latter has been quite low, and increases have been slow to occur.[5]

If competitive forces are dominant, it is usually expected that increases in productivity will result in a decline of prices, with remuneration to factors remaining unchanged or rising by less than increases in their productivity. Or, if competitive forces prevail in the product market but not in the factor market, increases in productivity will result in a rise of wages and/or payments to other factors, with prices remaining unchanged (assuming that increased payments to the factors do not increase by more than productivity changes).

Prebisch claims that at the center, productivity increases are almost matched by increases in wage payments, thus making price reductions impossible. This is mainly the result of union pressures. Even if some margin were left for price reductions, however, prices would not be reduced due to the monopolistic structure of the product markets in the center. There is therefore little chance for reduction of the center's export prices as productivity increases.

It is further claimed that in the periphery, productivity has also risen, but at a smaller rate than in the center. Thus, if prices had been reduced in both places in proportion to productivity increases, the terms of trade would have turned in favor of the periphery.[6] This has not happened. Export prices in the center have remained at their old levels or have even risen, while they have declined at the periphery.

To understand the reasoning of Prebisch, we should divide the periphery into two sectors: the export and the domestic sector. Productivity has been and is increasing faster in the former than in the latter. Implicit in all of the Prebisch and ECLA writings is that the labor market in the periphery is competitive. This does not mean that all the competitive conditions hold—such as labor mobility—but that in the wage sector, payments are standardized for most of the labor force at a level close to

[5] See also H. W. Singer, "The Distribution of Gains between Investing and Borrowing Countries," *American Economic Review, Papers and Proceedings* (May, 1950), p. 473.

[6] Singer states this even more succinctly when he says that "the fruits of technical progress may be distributed either to producers (in the form of rising incomes) or to consumers (in the form of lower prices). In the case of manufactured commodities produced in more developed countries, the former method, i.e., distribution to producers through higher incomes, was much more important relatively to the second method, while the second method prevailed more in the case of food and raw material production in the underdeveloped countries . . ." (*Ibid.*, p. 478).

subsistence due to the "unlimited" supply of labor in the wage sector.[7] Two different consequences can be obtained from the differential rates of productivity increases in the periphery. One possibility is that wages will rise in the same proportion as productivity increases in the export sector. In this case, the price of exports would not change; but since the labor market is competitive, the same wage prevails throughout the economy, which means that in the domestic sector wages will have risen by more than productivity increases. There are basically two ways out for the domestic sector: it can raise prices or it can absorb the higher costs. The former might be impossible due to the competitive nature of industries involved and also due to the threat of imports. Absorption of costs might also be impossible for most firms, and a drastic curtailment of domestic production would result, throwing many workers out of work and thus putting again a downward pressure on the general wage rate.

Prebisch assumes, however, that wages will not rise. The substantial increases in productivity in the export industries results in a large displacement of workers—higher productivity lowers the labor input requirements, and unless the increase in production is equal to the increase in productivity, employment will shrink. And with low income elasticity of demand for imports at the center, chances are that production will not increase substantially enough to absorb the redundant labor supply. There will be additional increases in the labor supply because of the " . . . vast numbers of marginal workers of low productivity rendering poorly paid personal services, as well as people engaged in other forms of precarious employment or disguised unemployment of a precapitalist character who should be moved to new jobs."[8] These pressures of the labor supply will not only keep wages from rising, but might even lower them.

Actually, in the export sector productivity has risen substantially, while wages have either lagged behind or have not risen at all. With a higher marginal productivity of labor and no change in wages, exporters should have substantial increases in their profits, even at the margin, and we should expect a rise in production, assuming again the export sector to be competitive. Producers in the export sector do not obtain such profits, however, due to the downward trend in export prices. The sequence of events can be expressed in more traditional forms. There is a rise in the productivity schedule of labor which is not accompanied by a

[7] See W. Arthur Lewis, "Economic Development with Unlimited Supplies of Labor," *The Manchester School* (May, 1954).

[8] Prebisch, *op. cit.*, p. 255.

rise in wages. This would produce increased profits for all producers and a profit would appear at the margin. Assuming now that we measured productivity in terms of revenue product, the productivity curve will fall right back again as prices of exports decrease. Thus, as Prebisch says, " . . . while the centers kept the whole benefit of the technical development of their industries, the peripheral countries transferred to them a share of the fruits of their own technical progress."[9]

If this analysis correctly reflects the state of affairs, it would be incumbent upon the governments of underdeveloped countries to adopt policies aimed at preventing the transfer abroad of increments of real income which result from the employment of the surplus labor created by increased productivity. Such policies, according to Prebisch, would consist of some kind of governmental interference in the export and import trade through protection, subsidies, export taxes, etc.

A guide to government policy is the ratio of physical productivity per man in the periphery to the physical productivity per man at the center, and the ratio of wages at the periphery to wages at the center.[10] Thus, if the productivity ratio for a particular industry is 0.50, wages at the periphery would have to be half as great as those at the center or even smaller. Those industries whose wage ratio is smaller than the productivity ratio will transfer part or all of the difference to the center. This approach can also be applied to domestic industries. If there is a general wage ratio for the whole peripheral country of 0.50, then all industries with a productivity ratio of 0.50 or more could grow without protection, while those with a productivity ratio of less than 0.50 would need protection or subsidization in order to operate.

The complications arising from an increase in productivity in the export sector can now be fully appreciated. If productivity in the domestic sector does not change, and hence the general wage level in both sectors remains the same, the fruits of this productivity increase will be transferred to the center, since prices of exports will drop in about the same proportion as the productivity increases. But the productivity increase and the inelastic international demand will cause employment to shrink in the export sector. The resulting manpower surplus can only be employed in domestic industries if wages will shrink so that industries with a lower productivity ratio can exist (i.e., a lower international productivity ratio). This lowering of wages in order to increase employment will cause more international transfers of income through the export industries: it might also stimulate the older domestic industries into the export sector, since wages

[9] UN, *op. cit.*, p. 10.
[10] Prebisch, *op. cit.*, pp. 258–59.

for them are now lower than productivity, but this will occur at the cost of still more international income transfers.

The policy implications of such a sequence of events are fairly obvious. To protect the standard of living of the population and to prevent too much transfer of income to the center, a wall of protection would have to be raised around many domestic industries. This wall should either be high enough to expand domestic production at current wage rates in order to absorb the unemployment resulting from increased productivity in the export sector, or it should be even higher in order to also prevent the transfer of the fruits of this higher productivity to the center.

Thus, the policy criterion for structuring the growth of the periphery economy is not a question of relative efficiencies, i.e., " . . . of comparing industrial costs with import prices . . . ;" it is rather a question of emphasizing the expansion of industries producing the greatest domestic increment of income.[11] If resources employed in exports produce less of an increment in income than they would in the import competing sector, then policies promoting the latter would be in order. Or, as Prebisch stated in another place, " . . . protection is economically justified when the possible loss caused by the fall of export prices is greater than the higher cost of internal production in relation to imports."[12]

In an attempt to establish more rigorous criteria for the policy maker, whose aim it is to maximize the creation of domestic income, Prebisch insists that one should not simply expand exports and domestic industrial activities so that returns from both are equal. Maximization occurs where marginal incomes or returns per person are equal, rather than where simpler per capita returns are equal. This will usually occur where per capita returns in export industry are larger than in domestic industry. Per capita returns in domestic industries and marginal returns are the same, even when per capita returns are falling, when viewed for the economy as a whole. Declining returns are seen as involving only internal income transfers. Thus nothing is lost for the economy as a whole.

In the case of exports, however, increased quantities produced and sold at lower prices will mean that per capita returns or income per person will be larger than marginal per capita returns. Lower prices involve a transfer of income abroad; hence marginal per capita returns equal per capita income minus transfers abroad. Thus, maximization occurs where marginal per capita returns are equal in both industries, but

[11] *Ibid.*, p. 255.
[12] In Lekachman, *op. cit.*, p. 279.

at that point per capita income of domestic industry (= marginal per capita income) is smaller than per capita income in the export industry. To insure this maximization, enough protection should be offered to the domestic industry to enable it to enjoy average returns equal to the export industries (i.e., higher prices charged and higher wages paid); otherwise resources will shift to the export sector, and equilibrium will settle at a point where domestic income is not maximized.[13]

CRITIQUES AND EMPIRICAL VERIFICATIONS

The critics of Prebisch have concentrated their fire mostly on the very first and basic assumption made about the terms of trade. Among the leaders of the antagonists, Professor Haberler claims that the theory

> is based on grossly insufficient empirical evidence, that it has misinterpreted the facts on which it is based, that the attempted explanation of the alleged facts is fallacious, and that there is no presumption at all that the alleged unfavorable tendency of the terms of trade will continue in the future.[14]

The first exposition of the Prebisch thesis in the ECLA report of 1950 based its assumptions on the long-term decline in the terms of trade as evidenced in the rise of British terms of trade since the 1870s.[15] The adequacy of such terms of trade is usually questioned, because over long periods no proper allowance can be made for changes in the quality of old products and for the appearance of new products. And,

> since it is primarily industrial products which improve in quality while primary products remain qualitatively more or less the same, and since literally hundreds of new products are added over the years to the list of finished industrial goods, this bias operates in such a way as to make the movement in the terms of trade of the primary exporters appear much less favorable than it actually was.[16]

Long-period terms of trade are also misleading because the British terms of trade used take c.i.f. import prices and f.o.b. export prices, which means that import prices include transport costs while export prices don't. Professor Ellsworth has shown statistically that

[13] Prebisch, *op. cit.*, Appendix.

[14] Gottfried Haberler, "International Trade and Economic Development," in National Bank of Egypt, *Fiftieth Anniversary Commemoration Lectures* (Cairo, 1959), p. 19; see also Haberler, "Critical Observations on Some Current Notions in the Theory of Economic Development," *L'Industria* (1957).

[15] UN, *op. cit.*, pp. 8–9.

[16] Haberler, "International Trade . . . ," *op. cit.*, p. 21.

> a large proportion, and perhaps all, of the decline in the British prices of primary products in the period 1876 to 1905 can be attributed to the great decline in inward freight rates . . . Since the prices of British manufactured exports fell in this period by 15 per cent, the terms of trade of primary countries, were f.o.b. prices used for their exports as well as for their imports, may well have moved in their favor.[17]

Although the evidence of Ellsworth for the years before the First World War is convincing, his explanation for the weaknesses of the terms of trade during the interwar period provides ammunition for Prebisch.

The decade of the 1920s was marked by a steady deterioration in the terms of trade of primary producing countries. Many of the explanations offered for this decline tend to support the Prebisch thesis. The increase in British real wages during the war was retained afterwards (even through the depression of 1920–21), and thus higher labor costs were built into the cost structure of manufactured goods. And, in addition, " . . . there can be no doubt that the administrative decisions of manufacturers, who chose to reduce output and employment instead of cutting prices, was also a factor . . . " in keeping the terms of trade in Britain's favor. This caused substantial amounts of unemployment in Great Britain. In primary producing countries, however, it is claimed that unemployment was small, while the burden of the depression was borne in terms of lower prices and lower incomes.[18] The substantial growth of capacity and productivity in primary producing countries, under pressure of the war, left these countries with excess capacities and stocks which contributed to a depression of the price level.

The further decline of the terms of trade in the early 1930s is also attributed by Ellsworth to factors tending to support the Prebisch thesis. He states himself that the decline between 1929 and 1933 was due to casuses " . . . which Prebisch would explain in terms of resistance to cuts in wages and profits at the Center, with contraction of output and of demand there exerting pressure on the Periphery and causing prices and wages in that sector to fall more sharply."[19] To sum up, we find that unemployment rose with sharp reductions in output, as real wages actually increased in the United Kingdom, while the primary producing countries experienced substantial price reductions and increased adverse movements of their terms of trade. Thus, although Ellsworth throws

[17] P. T. Ellsworth, "The Terms of Trade between Primary Producing and Industrial Countries," *Inter-American Economic Affairs*, Vol. X, No. 1 (Summer, 1956), 55–57.

[18] *Ibid.*, p. 59.

[19] *Ibid.*, p. 63.

Table 1—Ratio of Prices of Primary Commodities to Those of Manufactured Goods (1876–80 = 100)

Periods	Amount of finished products obtainable for a given quantity of primary commodities
1876–80	100.0
1881–85	102.4
1886–90	96.3
1891–95	90.1
1896–1900	87.1
1901–05	84.6
1906–10	85.8
1911–13	85.8
1921–25	67.3
1926–30	73.3
1931–35	62.0
1936–38	64.1
1946–47	68.7

Source: "Postwar Price Relations in Trade between Underdeveloped and Industrialized Countries," E/CN. 1/Sub. 3/W.5, 23 February, 1949, as presented in UN, *op. cit.*

serious doubts on the Prebisch terms of trade interpretation for the pre-World War I period, the interwar evidence does in part, and at times even substantially, support the Prebisch claims.

After the Korean boom, throughout the 1950s, the terms of trade of many peripheral types of countries, especially Latin America, have almost continuously deteriorated. This becomes obvious from a glance at Tables 1 and 2. It might be claimed that these numbers are commodity terms of trade, and that single factoral terms of trade might give

Table 2—Terms of Trade of Selected Countries in the 1950s (1953 = 100)

Country	1950	1951	1954	1955	1956	1957	1958	1959	1960
United States	100	91	96	98	98	102	106	109	108 (Aug.)
Latin America	107	100	109	99	94	92	88	84	83 (June)
Argentina		111	97	93	80	74	81	88	94 (II)
Bolivia	101	128	100	98	102	89	82	88	89 (II)
Brazil	112	112	136	106	99	96	93	79	
Colombia	87	92	130	105	116	103	88	78	76 (June)
France	98	88	95	97	97	95	99	99	102 (II)
West Germany	80	80	100	98	99	100	108	110	111 (Sept.)
United Kingdom	100	88	100	99	101	104	111	111	114 (Sept.)
India	109	130	108	108	107	98	103	103	109 (May)
Australia	121	119	92	81	80	82	64	69	65 (III)
Ghana	94	103	148	132	101	95	135	121	100 (I)
Japan	92	104	100	100	104	101	103	111	116 (Sept.)

Source: *International Financial Statistics*, International Monetary Fund (February, 1961).

Table 3—Value, Quantum, and Unit Value of External Trade (1953 = 100)[a]

Country		1953	1954	1955	1956	1957	1958	1959
Brazil								
Imports	Value	100	124	99	94	113	103	104
	Quantum	100	126	88	90	96	87	89
	Unit value	100	86	87	90	91	85	81
Exports	Value	100	101	92	96	90	81	83
	Quantum	100	100	109	111	103	99	115
	Unit value	100	117	92	89	87	79	64
Argentina								
Imports	Value	100	123	148	142	165	155	125
	Quantum	100	135	161	148	166	175	151
	Unit value	100	91	92	96	99	89	83
Exports	Value	100	93	84	86	88	90	92
	Quantum	100	108	94	103	111	120	122
	Unit value	100	85	87	81	78	74	73
Chile								
Imports	Value	100	102	112	106	132	124	123
	Quantum	100	102	123	107	127	118	123
	Unit value	100	99	96	97	99	98	97
Exports	Value	100	98	116	133	112	95	121
	Quantum	100	168	149	153	159	156	181
	Unit value	100	89	102	112	87	77	86
France								
Imports	Value	100	107	120	141	163	171	182
	Quantum	100	108	122	142	150	149	146
	Unit value	100	99	98	102	111	117	127
Exports	Value	100	111	130	120	141	162	209
	Quantum	100	116	134	120	132	138	165
	Unit value	100	94	95	99	106	116	126
West Germany								
Imports	Value	100	121	154	175	199	195	225
	Quantum	100	123	152	171	192	205	247
	Unit value	100	98	100	102	103	95	91
Exports	Value	100	120	140	168	196	201	224
	Quantum	100	122	142	165	188	195	222
	Unit value	100	98	98	101	103	103	100

[a] Imports c.i.f. and exports f.o.b.

Source: *Monthly Bulletin of Statistics*, UN (January, 1961).

better results.[20] The answer to such an objection would be that productivity in the peripheral countries has not increased to such an extent as to overcome the price decline. It should also seem obvious from Table 3 that in countries like Brazil or Argentina the decline in export prices was accompanied by a much smaller proportionate increase in export quantities, while the smaller decline in import prices was accompanied

[20] See G. M. Meier, "International Trade and International Inequality," *Oxford Economic Papers* (October, 1958), p. 287.

by a proportionately much greater increase in quantum imports. It could thus be inferred that the terms of trade are a substantial contributory force to the balance-of-payments and development problems of many key peripheral countries. This was best summarized by the GATT report of 1959 which states, after examining all available data, that

> every nonindustrial area imported during 1953–58 more manufactures than they could finance by current earnings. The share of what nonindustrial areas as a whole were able to finance from current export receipts fell during the period 1953–57 from approximately 90 to 60 per cent, involving a great increase in their dependence on foreign capital. In 1958 the share went up to about 65 per cent, mainly on account of Dollar Latin America and Other Countries.[21]

The GATT report also contains a section which corroborates the above observations concerning export and import price and volume trends in the 1950s.[22] Its conclusions about trends in the 1950s and predictions for the future for primary producing countries are worth reproducing in full, since they very much resemble Prebisch's general viewpoint:

> This capacity [to import] has for the low-income countries critically depended on the exports of their primary products to the industrial countries and will obviously continue to depend to a large extent in future on such demand as will be emanating from these regions. The question of the prospects for this demand therefore arises. While some expansion in the volume of imports of primary products is implicit in the future growth of manufacturing production in the industrial countries (where about nine-tenths of the world's total industrial capacity is at present located), it is equally certain, in the light of experiences of the 1950s, that such imports would not rise proportionately with the advance of the industrial economies. Thus, the paradox facing the low-income countries is that, while they cannot raise their output and real incomes without a substantial growth in imports from industrial countries, the industrial countries have been able to raise output and incomes with a diminishing proportion of imports from primary producing countries.[23]

Even if some of the doubts expressed concerning the validity of the long-run downward tendency of the terms of trade are correct, it seems fairly clear that over long and crucial periods of time in the twentieth century the terms of trade have been declining for many peripheral areas.

[21] General Agreement on Tariff and Trade, *International Trade* 1959 (Geneva, 1960), p. 27.

[22] *Ibid.*, p. 38.

[23] GATT, *op. cit.*, p. 53.

And the few periods of primary materials boom were not sufficient to build up enough reserves for adverse periods.[24] This has been especially true for the greater part of the 1950s, when concern for economic development has become increasingly important. It remains now to examine the validity of Prebisch's explanation for the downward trend of the terms of trade and their effects.[25]

The evidence available suggests that the explanation for the falling terms of trade because of low income elasticities of center countries and high income elasticities for peripheral countries has validity for many important parts of the world. For example, in Argentina and Chile there has been a tendency during most of the 1950s for industrial production to rise at a slower pace than imports on a quantum basis—Argentina's industrial production increased by 25 per cent between 1953 and 1958, while imports increased by 75 per cent, while Chile's industrial production rose by 8 per cent in the same period and her imports by 18 per cent. In India, industrial production rose by 15 per cent during the 1953–59 period, while the quantum of imports increased by 59 per cent. For the industrial countries we find the opposite to be true. In France a rise in industrial production in the 1953–59 period of 56 per cent was accompanied by a rise of quantum imports of 46 per cent. For West Germany, a rise in industrial production of 62 per cent in the same period was accompanied by a rise in the importation of food (by volume) of 90 per cent and of raw materials of 70 per cent, as compared to a rise in imports of finished goods of over 250 per cent. For the United Kingdom, industrial production rose by 35 per cent, while the importation of food rose by 18 per cent, and raw material imports actually declined. Finally, for many industrial countries, food and raw materials have been a declining proportion of total imports. For example, for West Germany food has declined from 44 per cent of total imports in 1950, to 30 per cent in 1959, and raw materials from 30 per cent to 22 per cent, while for the United Kingdom food has remained approximately the same (declining

[24] It should also be noted that capital movements have not compensated for adverse terms of trade conditions in the 1950s. According to data presented in the GATT report, ". . . the net inflow of private investment capital over the decade was not even sufficient to cover the net outflow of payments earmarked for servicing past investments and loans." *Ibid.*, p. 43.

[25] In a fairly sophisticated study, Kindleberger comes to the conclusion that "the views of Singer and Prebisch on the terms of trade of underdeveloped countries thus derive support from a more thorough statistical investigation." See Charles P. Kindleberger, "The Terms of Trade and Economic Development," *The Review of Economics and Statistics*, Supplement (February, 1958), p. 85.

by only 1 or 2 per cent) and raw materials declined from 35 per cent of total imports to 24 per cent.[26]

Although it is difficult to prove that the unfavorable terms of trade for peripheral countries are due to monopolistic pricing at the center, and a greater degree of competition at the periphery, Table 4 does show that export prices of center-type countries have been fairly stable around

Table 4—Export Prices of Selected Countries (1953 = 100)

Country	1950	1951	1954	1955	1956	1957	1958	1959	1960
United States	88	101	99	100	103	107	106	106	108 (Oct.)
Latin America	95	105	108	99	97	98	92	87	88 (Aug.)
Argentina		120	90	87	78	76	73	75	82 (II)
Colombia	90	98	130	107	121	108	91	80	79 (Nov.)
Brazil	90	110	117	92	89	87	79	64	63 (II)
United Kingdom	84	99	99	101	105	110	109	108	110 (Nov.)
West Germany	78	98	98	98	101	103	103	100	103 (Nov.)
France	85	98	94	95	99	100	97	89	93 (III)
Sweden	75	117	98	101	103	103	102	99	102 (III)
India	98	143	102	100	101	101	100	98	112 (Aug.)
Ghana	83	109	141	121	97	92	128	116	98 (I)
Australia	104	125	92	83	84	88	69	74	70 (Oct.)

Source: International Monetary Fund, op. cit.

Table 5—A Measure of Real Wages: Money Wages and the Cost of Living (1953 = 100)

Country	1950	1951	1952	1954	1955	1956	1957	1958	1959
United States									
Wages	83	90	94	102	106	112	117	120	125
Cost of living	90	97	99	100	100	102	105	108	109
Argentina									
Wages	59	74	92	116	130	148	196	277	435
Cost of living	51	69	96	104	117	132	165	217	464
France									
Wages	64	82	97	105	113	126	137	151	163
Cost of living	77	90	101	100	101	103	106	121	129
West Germany									
Wages	77	88	95	102	110	120	131	140	148
Cost of living	93	100	102	100	102	104	107	110	112
United Kingdom									
Wages	82	88	96	104	111	120	126	130	134
Cost of living	81	89	97	102	106	112	115	119	120
Japan									
Wages	61	73	87	107	111	117	123	122	129
Cost of living	77	89	93	106	104	105	108	109	110

Source: *International Labour Review, Statistical Supplement* (Geneva, December, 1960).

[26] Data mentioned in this paragraph can be obtained and calculated from such standard sources as the IMF *International Financial Statistics*, the UN *Monthly Bulletin of Statistics*, and individual national statistical sources.

an upward trend throughout most of the fifties, while the export prices of periphery-type countries have either declined substantially or undergone wide fluctuations. In Table 5 we also find evidence of steady increases in real wages of industrial countries, while wages in Latin American countries such as Argentina or Chile have either fluctuated substantially while not rising over the periods covered, or have actually decreased.

It would obviously be an exaggeration to accept the assumption of a purely competitive labor market in the periphery areas, which the model does, but there is substantial evidence that in the wage-paying sectors of underdeveloped countries there is enough competition for jobs so as to give labor a substantially disadvantageous position in bargaining for wages. Hence increases in productivity are not accompanied by any substantial rises in wage rates.

THE THEORY IN RELATION TO TRADITIONAL DOCTRINES

To the extent that the Prebisch analysis has some validity, it is not a challenge to the classical theory of international trade.[27] It probes into an area of analysis where the classical theory had little to contribute, i.e., the relation between trading countries in a dynamic setting. Ever since the days of List and Carey, it has been conceded that a strong case could be made for infant-industry protection on dynamic grounds. Even Marshall conceded this point, though he had doubts about the feasibility of administering such protection.[28] A most pertinent observation was made by J. H. Williams, who said two decades after having given a devastating critique of the assumptions upon which the classical theory is based, that

> International trade is so complex, so subject to heterogeneous conditions and to ceaseless changes in conditions, that it seems to me almost as naive to speak of *the* theory of international trade as I have long thought it to be to speak of *the* theory of the business cycle. But we can study processes of change, and are more likely to do so usefully if we do not have to put everything that does not fit the long-run "theory" under an expansible umbrella labeled short-run "problems."[29]

[27] See Jacob Viner, *International Trade and Economic Development* (Oxford at the Clarendon Press), p. 44.

[28] E.g., see Alfred Marshall, *Official Papers* (London: Macmillan, 1926), pp. 386–95.

[29] John H. Williams, *Economic Stability in a Changing World* (New York: Oxford University Press, 1953), p. 32.

One of the principal problems to which Prebisch and his followers call attention is the harm which changes in international demand and productivity conditions over time can do to the relative benefits from trade which goes to primary producing countries. At any one period of time all partners benefit from trade. But the relative benefits accruing to the peripheral partner in time $t+1$ might be smaller than at time t. To preserve and expand their capacity to import and to protect their income and employment, some degree of protection and subsidization becomes necessary, unless enough capital inflows occur to preserve the capacity to import. This is a variation of the infant industry argument, or rather an expanded version of it. Its basic purpose is to help underdeveloped countries in their adjustment process to changing international conditions.

The theory also refutes the classical assumption of competition. With both the factor and products markets of the center operating under monopolistic influences, while competitive markets prevail at the periphery, some government intervention, in the form of protection or subsidization, could be considered as being an attempt to introduce a degree of countervailance in order to protect the periphery's income.